Before the
Federal Communications Commission
Washington, D.C.

In the Matter of	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51

Digital Public Media Networks to Advance Broadband And Enrich Connected Communities

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"We recognize the dangers of lapsing into fuzzy-minded ecstasy over the unlimited social potential of the new electronic technology. … [However t]he opportunity is at hand to bring us together through the teaching and inspiration possible in a noncommercial telecommunications alternative…. [f]rom the careful cultivation of a public discourse in its most expansive and profound sense."[1]

I. INTRODUCTION AND PROPOSAL

We are media law scholars studying how redesigned systems of digital public media might serve the public's needs for information, communication, engagement, and meaningful narratives in the 21st century. The Federal Communications Commission's broadband workshops[2] and several recent reports have documented that this nation lacks both the communications infrastructure and the narrative content necessary to involve the entire population in democratic decisionmaking or to foster widespread economic and social flourishing.[3] Information deficits are especially keen in the areas of investigative journalism, effective teaching materials, and content directed at underserved, minority, and poor populations.[4] A number of these reports have called on digital public media – building on, but also transcending, the legacy public broadcasting infrastructure – to help correct these deficits. Our research suggests that there are tremendous opportunities to use digital public media to drive

[1] CARNEGIE COMMISSION ON THE FUTURE OF PUBLIC BROADCASTING, A PUBLIC TRUST: THE REPORT OF THE CARNEGIE COMMISSION ON THE FUTURE OF PUBLIC BROADCASTING 298-99 (1979) [hereinafter CARNEGIE II].

[2] *See, e.g., Deployment - Wired*, National Broadband Plan Workshop, Aug. 12, 2009, *available at* http://broadband.gov/ws_deployment_wired.html; *Deployment – Unserved/Underserved*, National Broadband Plan Workshop, Aug. 12, 2009, *available at* http://broadband.gov/ws_deployment_unserved.html; *Building the Fact Base: The State of Broadband Adoption and Utilization*, National Broadband Plan Workshop, Aug. 12, 2009, *available at* http://broadband.gov/ws_adoption_fixed.html.

[3] *See, e.g.*, Knight COMMISSION ON THE INFORMATION NEEDS OF COMMUNITIES IN A DEMOCRACY, INFORMING COMMUNITIES: SUSTAINING DEMOCRACY IN THE DIGITAL AGE 23-32 (2009), *available at* https://secure.nmmstream.net/anon.newmediamill/aspen/kcfinalenglishbookweb.pdf (establishing findings for needs of information communities) [hereinafter KNIGHT COMMISSION]; AMERICAN UNIVERSITY SCHOOL OF COMMUNICATION CENTER FOR SOCIAL MEDIA, PUBLIC MEDIA 2.0: DYNAMIC, ENGAGED PUBLICS (2009), *available at* http://www.centerforsocialmedia.org/documents/whitepaper.pdf [hereinafter PUBLIC MEDIA 2.0]; CORPORATION FOR PUBLIC BROADCASTING, PUBLIC RADIO IN THE NEW NETWORK AGE: WIDER USE, DEEPER VALUE, COMPELLING CHANGE 1-3, The Report of the Public Radio Audience Growth Task Force Draft for Discussion and Comment (2009) (discussing the need for public media, and media organizations at large, to engage more directly with underserved and overlooked members of the population) [hereinafter GROW THE AUDIENCE].

[4] *See, e.g.*, DAVID WESTPHAL, PHILANTHROPIC FOUNDATIONS: GROWING FUNDERS OF THE NEWS 3 (2009) (discussing the expense of investigative journalism as a reason that commercial news organizations are declining to sponsor high-quality investigative reporting); KNIGHT COMMISSION, *supra* note 3, at 27 (stating that journalistic "[c]overage falls short everywhere"); JOHN HORRIGAN, WIRELESS INTERNET USE 4 (2009), Pew Internet & American Life Project, *available at* http://pewinternet.org/~/media//Files/Reports/2009/Wireless-Internet-Use.pdf (referencing the digital divide in content that is provided for low-income minority groups); An Open Letter to Our Public Media Colleagues, May 2009, *available at* http://www.nativepublicmedia.org/images/stories/documents/OpenLetter.pdf (arguing that service failures to "America's younger and more ethnically diverse audiences" make them "public media's great, untapped resource").

broadband adoption and exploit broadband capacity for the public purposes that animate this proceeding.[5]

In theory, and in the best traditions and highest aspirations of American communications policy, these networks can maximize the "social dividend" of broadband technology.[6] The potential is there, and can be realized if public media systems become more plural, diverse, open, networked, innovative, and focused on a service mission to meet public needs where the market will not go. We offer specific proposals in connection with this proceeding to further the efforts that many in the public media community are undertaking to realize this potential.[7]

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The central goal of the Commission's broadband initiative is a familiar one: to foster universally available and technically superior communications services that encourage public dialog and learning.[8] That goal depends on adequate telecommunications infrastructure, but infrastructure alone is not enough. Infrastructure is the "what." The "why" of universal, fast and reliable broadband is to connect people to information that improves their lives and those of others – communication that is essential to performing the functions of democratic citizenship. Linking individuals and communities to relevant information – the "how" of broadband policy – requires robust, flexible, and innovative networks. It also requires the ***creation*** of moving narratives, accountability reporting,[9] and a safe space to engage publics respectfully in issues of relevance to them; the ***curation*** of information in ways that make it accessible, understandable, and visible; and agents that intentionally ***connect*** individuals to each other, to community institutions, to information that they need, and to stories that inspire.

We can think of these components of broadband content circulation – creation, curation, and connection – as linking the first mile of production to the last mile of outreach. It was to achieve this essentially broadband goal that the public broadcasting system was created in a pre-

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[5] *See, e.g.*, Comments of Sesame Workshop at 5 (June 8, 2009) (". . . [T]he FCC should recognize the role that engaging, creative content can play in driving broadband demand. . . . Supporting the development of more high quality, educational content online will not only help children learn but can drive demand for broadband services by reminding parents of the educational benefits of this technology."); Comments of One Economy Corporation at 6 (June 8, 2009) ("prevalence of relevant content" will spur broadband adoption).

[6] This term comes from CARNEGIE II, *supra* note 1, at 297.

[7] *See generally* GROW THE AUDIENCE, *supra* note 3; American University School of Communication Center for Social Media, Scan and Analysis of Best Practices in Digital Journalism 15 (2009), *available at* http://www.centerforsocialmedia.org/documents/cpb_memo_final2.pdf [hereinafter Best Practices]; Gupta Consulting, Embracing Digital: A Review of Public Media Efforts Across the United States (2009) [hereinafter Embracing Digital]; *Meeting Report: First Aspen Institute Roundtable on Public Service Media*, Summary Document from the first meeting in the Aspen Roundtable Series (Feb. 1-3, 2009), *available at* http://www.cpb.org/events/aspen2009/0905/Aspen2009FirstMtgReport.pdf; NPR Digital Think In, http://digitalthinkin.ning.com/ (last visited Nov. 5, 2009).

[8] *See In re A National Broadband Plan for Our Future*, Notice of Inquiry, GN Docket No. 09-51,FCC No. 09-31 (rel. April 8, 2009) (hereinafter "*NOI*") at ¶¶ 70, 88 (the Commission is designing "a plan for use of broadband infrastructure and services in advancing . . . civic participation,…education").

[9] LEONARD DOWNIE, JR. & MICHAEL SCHUDSON, THE RECONSTRUCTION OF AMERICAN JOURNALISM 5 (2009) (discussing the increase of "accountability reporting" by newspapers that target those who hold power and influence over members of society, including businesses, educational institutions, and cultural institutions as well as government bodies).

broadband era. The FCC and Congress, catalyzed by private philanthropic foundations, assembled the system in the 1960's from scattered local stations that were providing educational programming.[10] In 1965, the independent Carnegie Commission called for a new system of "public television"[11] that would use noncommercial programming to "deepen a sense of community in local life . . . show us our community as it really is . . . bring into the home meetings . . . where people of the community express their hopes, their protests, their enthusiasms, and their will."[12] This system would indeed be a *system* of stations, focused on local life, but networked to provide national programming and to connect communities to the national project.[13] The Public Broadcasting Act of 1967 closely followed the Carnegie Commission's recommendations.[14]

Broadband technology now allows public media to achieve the vision that, for the past 60 years, has been largely aspirational. The Federal government has invested well over $10 billion in the public broadcasting system.[15] States have invested billions more. There is now an opportunity to leverage that public investment in public service broadcasting to create public service broadband. These comments seek to identify features of new public media systems that would nurture the respectful dialog, trusted journalism, and important narratives that public broadcasting has fostered even within the constraints of its technological and structural mandates.

To be sure, there have been powerful moments in the history of public broadcasting. There have been notable times when it has gone where no one else will: gavel-to-gavel coverage of the Watergate hearings; the creation of quality children's television; the pioneering development of science and documentary programming.[16] But public broadcasting has not

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[10] CARNEGIE II, *supra* note 1, at 33-35.

[11] CARNEGIE COMMISSION ON THE FUTURE OF PUBLIC BROADCASTING, THE REPORT AND RECOMMENDATIONS OF THE CARNEGIE COMMISSION ON EDUCATIONAL TELEVISION: PUBLIC TELEVISION, A PROGRAM FOR ACTION (1967) [hereinafter CARNEGIE I].

[12] *Id.* at 92-99.

[13] *Id.* at 3 (finding that "a well-financed and well-directed educational television system, substantially larger and far more pervasive and effective than that which now exists in the United States, must be brought into being if the full needs of the American public are to be served").

[14] 47 U.S.C. § 396(a)(5) (2000) (providing that to further the general welfare, noncommercial television should be "responsive to the interests of people both in particular localities and throughout the United States, [and] which will constitute an expression of diversity and excellence.").

[15] Federal Appropriation History, Center for Public Broadcasting, http://www.cpb.org/aboutcpb/financials/appropriation/history.html (last visited Nov. 5, 2009) (listing general appropriations amount, though not including appropriations for digital transition and interconnection capital); CPB Appropriations History 1969-2011 (on file with authors) (listing general appropriations, appropriations for digital transition, and for interconnection capital for a total of over $10 billion, and an average of $35.7 million per year (ranging from $25 to $50 million per year) appropriated for digital infrastructure since 2002); *see also* Summary of Public Television's Legislative Requests, APTS Action, Inc., May, 2009, http://www.apts.org/library/legislativetoolkit/Appropriations/leg_requests.cfm (last visited Oct. 29, 2009) (listing approved funding to Corporation for Public Broadcasting (CPB) and CPB digital for 2008-2009 and funding requests for 2010).

[16] *See* QUALITY TIME?: THE REPORT OF THE TWENTIETH CENTURY FUND TASK FORCE ON PUBLIC TELEVISION 24, 88, 125 (1993) (describing such high-quality science programming as the math series *Futures*, the Children's Television Workshop's science series, as well as PBS's "gavel-to-gavel" coverage of the Senate Watergate hearings); JOHN WITHERSPOON AND ROSELLE KOVITZ, THE HISTORY OF PUBLIC BROADCASTING 68 (1987) (noting children's programming a core mission since its earliest days, manifested in trusted television shows such as the

performed adequately in catalyzing and assisting in local content creation. With some exceptions, local broadcasting entities have not maximally exploited their physical presence in hundreds of communities to engage and serve the interests of the public. Nor has the system as a whole been able to serve as a platform to curate noncommercial content produced outside of the system. These deficiencies have many sources, and it is not the purpose of these comments to detail or justify them. It suffices to say that however public broadcasting might have been structured and its practitioners motivated, broadcast technology would never have supported the lofty aspirations of 1967. Capacity-constrained and one-way, broadcasting alone has never been capable of truly engaging diverse local populations while also networking effectively nationally with a wide array of partners.

The promise of public media can come about only if public media networks are understood to be open, inclusive, and mission-oriented confederations of content creators, curators, and connectors, working in collaboration with the public to circulate information, incubate innovation, and stimulate conversation. Public media includes noncommercial entities operating on and producing for broadcast, cable and satellite, web-only, and mobile platforms. Sometimes public media is produced by public broadcasters; sometimes by museums, libraries, and community groups; and sometimes by individual citizens who contribute their works to public media content and aggregations. What public media entities might be said to share is not membership in an organization or receipt of public funds (although this is common), but the principal mission of engaging publics with information that is relevant to improving lives as lived in particular communities and shared polities.

Today, public media entities are doing much with meager resources to exploit digital technology for mission-driven purposes. We illustrate these efforts in Section II, focusing on the ways in which these efforts depend upon and stimulate broadband use. The fact is, however, that most of public media resources are tied up in a public broadcasting network that is structured for 20th-century communications, both as a matter of law and practice. Changes in law are needed to free resources for the most effective broadband content, curation, and connection strategies in keeping with the ambitious goals of the broadband project. Changes in the way public media is practiced are needed as well, and public policy should incent them. Section III outlines the public media characteristics that we think are necessary for what the Knight Commission has called healthy "informed communities" in the digital age.[17]

The mission of public media – to engage publics with information relevant to improving lives in particular communities and shared polities – is of growing importance in a world where information is abundant, but does not always reach the people who need it, and where wisdom and knowledge remain hard won. Defining public media systems with reference to the following characteristics would support and strengthen this mission:

- **Accessible –** optimized to include as many voices, to make available as much information, and to engage as many people as possible, where and how they can best be engaged, with media and information that matters to them.

Friendly Giant and the *Children's Corner* in the 1950s, to *Mister Rogers' Neighborhood* and *Sesame Street* a decade later); *see also infra* note 130 and accompanying discussion of pioneering documentary work.

[17] KNIGHT COMMISSION, *supra* note 3, at 2.

- **Modular –** structured so that noncommercial entities (such as broadcast stations, public access stations, independent producers, community media centers, museums and libraries) are able and encouraged to specialize in particular subject matter verticals (e.g., science, health, environment, labor), particular services (e.g., educational production, journalism, archiving, training), and particular technical competencies (e.g., applications, games, interfaces, platforms). These specialties can then be shared through digital networks, over common platforms, with others and tailored for local needs.

- **Engaging –** intentionally designed to put engagement at the core of what public media does, developing content and curation strategies from the start to reach out to individuals, communities, and, where desired, schools and other institutions to engage people in information and narratives, to turn information into knowledge and wisdom, to provide tools for acting upon information, and to encourage members of the public to themselves contribute information and knowledge back through the networks.

- **Networked –** self-organized in virtual networks based on platforms and standards sufficiently open to foster economies of scale in the production of materials, innovative partnerships among different kinds of institutions, and ad hoc innovation based on access to materials and tools.

- **Diverse** – intentionally constructed to solicit contributions from an ethnically, economically, and geographically diverse population, to be a platform for diverse voices, and to focus especially on the needs of those with insufficient access to relevant information.

- **Innovative** – hospitable to daring experiments in journalism, story-telling, information gathering and presentation, public engagement, trans-media learning, business models, metrics, and technology.

- **Transparent** – meaningfully open with respect to the flow of public resources, the process of reporting and story-creation, the criteria for publicly funded grants, the projects and partnerships undertaken, impact measurements, and diversity.

AMEND-IT. By this, we mean literally that the Public Broadcasting Act should be amended, as should entrenched ways of viewing the role of public media networks in our communications ecosystem. Specifically, we urge as our "prayer for relief" that the FCC take the following actions in its National Broadband Plan:

1. **Acknowledge the Role of Enhanced Digital Public Media Networks in the Broadband Future.** The FCC should briefly articulate the contributions that systems of digital public media, properly configured and committed, could make to the goals of the broadband project. Many in the public media and communications policy communities are working towards change; a clear statement from the FCC, as part of its broadband policy strategy, that digital public media could contribute significantly to the broadband promise would motivate even more aggressive efforts in the public interest.

2. **Recommend to Congress that it amend the Public Broadcasting Act.** The Public Broadcasting Act remains much as it was when enacted in 1967.[18] It assumes and perpetuates a public media system that is organized almost exclusively around broadcast technologies and FCC broadcast licenses. Although these licensees should continue to be centerpieces of digital public media systems, the systems need to become more accessible to other public media participants and technologies. Moreover, the law needs to reflect and encourage the transition to highly participatory and collaborative communications networks. Relatedly, copyright laws that were written to support public broadcast distribution of content need to be updated to accomplish the same goals on digital networks.[19]

3. **Recommend to Congress that it conduct a pan-governmental audit of spending on public service communications projects.** The annual federal appropriation to the Corporation for Public Broadcasting is about $500 million.[20] The federal government undoubtedly spends many millions more on other public media projects designed for some of the same purposes: to inform and engage the public. These expenditures ought at a minimum be more transparent and publicized like, for example, the government's IT expenditures.[21] Moreover, an audit might well reveal that funds spent on training films, or other forms of public communications could be more effectively leveraged if that content were made accessible and extensible over public media platforms.

4. **Initiate a proceeding on noncommercial television spectrum.** At some point, it is likely that the Commission will consider alternative uses of portions of the broadcast television spectrum.[22] If the possession of a broadcast license becomes only one, and not a necessary, criterion for public media entities, some noncommercial television licensees might be ready to give up their licenses while retaining the value of that infrastructure and other forms of public support within their communities. The FCC should explore

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[18] *See* 47 U.S.C. § 396 (2000).

[19] 17 U.S.C. § 114(b) (2006) (granting public broadcasters the right to use sound recordings without permission or in educational television and radio programs that are not commercially distributed); 17 U.S.C. § 118(d) (2006) (granting a compulsory license to use "published nondramatic musical works and published pictorial, graphic, and sculptural works"); Ellen P. Goodman, *Public Service Media 2.0*, in …AND COMMUNICATIONS FOR ALL: A POLICY AGENDA FOR A NEW ADMINISTRATION 270 (Amit M. Schejter ed., 2009) (discussing how technological and business changes have rendered special copyright benefits to public broadcasters increasingly useless).

[20] CPB Appropriations History 1969-2011 (on file with authors).

[21] *See, e.g.*, Federal IT Dashboard, United States Government Official Web Site, http://it.usaspending.gov/ (last visited Oct. 27, 2009); FAQ For Public, Federal IT Dashboard, United States Government Official Web Site, http://it.usaspending.gov/?q=content/faq (last visited Oct. 27, 2009) (describing the Dashboard as a resource to provide the public with details of Federal information technology investments and the ability to track investment progress over time).

[22] Martin Peers, *Television's Spectral Gold Mine*, WALL ST. J., Oct. 10, 2009, http://online.wsj.com/article/SB125510547019776403.html. A reallocation of the broadcast television spectrum has been proposed for many years. *See* Thomas W. Hazlett, *The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas and the Punchline to Ronald Coase's ''Big Joke'': An Essay on Airwave Allocation Policy*, 14 HARV. J. L. & TECH. 335, 456 (2001) (discussing policy reports suggesting reallocating spectrum from television broadcasting to other services); J.H. Snider, *The Art of Spectrum Lobbying: America's $480 Billion Spectrum Giveaway, How it Happened, and How to Prevent It From Recurring* 32 (New Am. Found.: Wireless Future Program, Working Paper No. 19, 2007), http://www.newamerica.net/files/art_of_spectrum_lobbying.pdf (noting efforts in broadcast digital television standards that might artificially restrict spectrum).

these options not only in the interest of public media, but in the interest of innovating with spectrum policy.

II. EMERGENT DIGITAL PUBLIC MEDIA PRACTICES: MAKING BROADBAND SERVE PUBLIC PURPOSES

> *". . . [T]he Commission must include a plan for the use of broadband infrastructure and services in advancing a broad array of public interest goals, including consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national public purposes."*[23]

Broadband infrastructure alone will not further the enumerated national public purposes and other essential public welfare goals. Commercial interests and individual creativity alone will not supply the content, community connections, and access to information that will maximize the utility of broadband infrastructure for the public good.[24] As the Carnegie Commission found in 1979, in addressing the possibilities for a more robust system of "public telecommunications":

> [T]he non-profit sector – in education, public service, and the arts – has a different bottom line from the business community. In an ultimate sense, its contributions to human betterment constitute its 'profit.' This is a unique form of social dividend that Western society has devised as a counterweight to the implacable economic laws of the marketplace.[25]

A system of digital public media – or more accurately, cooperative ***systems*** of public media – can work with intention to deploy broadband content to forge connected communities. The Public Broadcasting Act from the start recognized the value of "public telecommunications services," not limited to broadcast technologies.[26] It recognized the potential of such services to

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[23] NOI, *supra* note 8, at ¶9.

[24] *See supra* note 4 and accompanying citations; PERSEPHONE MIEL & ROBERT FARIS, NEWS & INFORMATION AS DIGITAL MEDIA COMES OF AGE 1, 42 (2008); *available at* http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Overview_MR.pdf (describing how newspapers are reducing and shifting the scope of their original reporting, leaving a gap for more costly, less commercially viable sectors such as international news and specialized subject areas—one that participatory media entities are neither designed nor able to fill); Pat Aufderheide & Jessica Clark, *Public Broadcasting & Public Affairs: Opportunities and Challenges for Public Broadcasting's Role in Provisioning the Public With News and Public Affairs*, in MEDIA RE:PUBLIC (2008), *available at* http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Public%20Broadcasting%20and%20Public%20Affairs_MR.pdf (describing the fragmentation of the commercial media marketplace and public media's potential to play a role for the future nonprofit media sector); *see also* Howard A. White, *Fine Tuning the Federal Government's Role in Public Broadcasting*, 46 FED. COMM. L.J. 491, 495 (1994) (describing the historical need for programming in such areas as classical music, instructional programming, and local cultural or community events as a meaningful alternative to the "entertaining, but generally uninspiring," programs offered by commercial stations or networks).

[25] CARNEGIE II, *supra* note 1, at 297.

[26] 47 U.S.C. § 396(a)(2) (2000).

"constitute valuable local community resources for utilizing electronic media to address national concerns and solve local problems through community programs and outreach programs."[27] Consider how far-reaching this vision was. Broadcast technology of the 1960's was not well-suited to deliver on this vision. But broadband technology, combined with the creative, content, and community assets of existing and new public media entities, really can.

A. Functions: How Public Media Can "Address National Concerns and Solve Local Problems"

We have identified three core functions of digital public media, based on the directives of the Public Broadcasting Act and research on best practices in the field. These functions are (1) to create content – particularly narratives in the form of journalism, long-form documentaries, oral histories, and cultural exploration – that markets will not and that is important to individual and social flourishing;[28] (2) to curate content, serving as both a filter to reduce information overload and a megaphone to give voice to the unheard; and (3) to connect individuals to information and to each other in service of important public purposes.

1. Create

Public media should **create** content where there are market failures in accordance with a public service objective.[29] Public media contributions are especially needed in the areas of enterprise journalism (particularly at the local level), educational content, and content that

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[27] *Id.* at § 396 (a)(8).

[28] Educational literature acknowledges the value of narratives in enhancing learning and enriching educational models. *See, e.g.*, David Parker, *Moving Image, Media, Print Literacy, and Narrative*, Research Into Teaching & Learning, Feb. 21, 2007, British Film Institute, http://www.bfi.org.uk/education/research/teachlearn/nate.html (last visited October 27, 2009) ("Narrative has long been a tool in education, particularly that of children."); Bradford W. Mott, Charles B. Callaway et al., *Towards Narrative-Centered Learning Environments*, *in* NARRATIVE INTELLIGENCE: PAPERS FROM THE 1999 FALL SYMPOSIUM 78-82 (M. Mateas & P. Sengers, eds.) (1999), *available at* http://people.csail.mit.edu/lsz/papers/mczll-Narrative-99.pdf ("Narrative has long been acknowledged as a key element in literacy development and this should come as no surprise since we all read, write and imagine narratives long before and long after our formal schooling has taken place."); Martin J. Weller, *The Use of Narrative to Provide a Cohesive Structure for a Web Based Computing Course*, 1 J. OF INTERACTIVE MEDIA IN EDUCATION 2000, *available at* www-jime.open.ac.uk/00/1 ("Because of the active nature of narrative, by immersing learners in a captivating world populated by intriguing characters, narrative-centered learning environments can enable learners to participate in [a multitude of learning] activities.").

[29] *See* DOWNIE & SCHUDSON, *supra* note 9, at 14-25 (detailing the different kinds of journalism that the market fails to support); DIGITAL BRITAIN FINAL REPORT 146-47 (2009) (discussing market failure in children's programming in Britain); *Annex 11: Market Failure in Broadcasting*, *in* THE DIGITAL OPPORTUNITY: OFCOM'S SECOND PUBLIC SERVICE BROADCASTING REVIEW (2008), *available at* http://www.ofcom.org.uk/consult/condocs/psb2_1/annex11.pdf (examining market failure in broadcasting with reference to the broader social value of media and communications services); Jonathan M. Phillips, *Freedom By Design: Objective Analysis and the Constitutional Status of Public Broadcasting*, 155 U. PENN. L. REV. 991, 995-96 (2007) ("Myriad justifications for public service broadcasting orbit the universe of media theory, but they all revolve around the idea of market failure," where market pressures drive commercial media to under-produce content thought valuable to society); Ellen P. Goodman, *Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets*, 19 BERKELEY TECH. L.J. 1389, 1415-19 (2004) (discussing market failure theory of public media) [hereinafter *Media Policy Out of the Box*]; Monroe E. Price, *Public Broadcasting and the Crisis of Corporate Governance*, 17 CARDOZO ARTS & ENT. L.J. 417, 427 (1999) (describing rationales behind public television, including market failure).

illuminates issues of particular relevance to minority and underserved audiences.[30] The following successful recent projects and promising future initiatives demonstrate what content public media entities can generate when acting in the public interest. All of them depend on broadband connectivity; many would be dramatically better with better broadband.

- *Local Enterprise Journalism.* **Argo**, a pilot project of National Public Radio (NPR) recently funded by the Knight Foundation and the Corporation for Public Broadcasting (CPB), is designed to increase local reporting capacity among public broadcasting stations by creating, curating, and distributing web-original content and original reporting in specialized, under-developed subject areas such as environmental policy, rural economic diversification, or public health. The content will be built on a common content sharing infrastructure that allows each participant group will be able to easily access other groups' work. The front-end platform will also offer Web. 2.0 services, including blogging, search and aggregation, and social media tools.[31]

- *Analysis.* Chicago Public Radio developed plain spoken coverage of the recent economic crisis on **This American Life**, which later spun off into NPR's **Planet Money**, a multimedia team covering the global economy. The output includes a high-quality podcast, Twitter feeds, a Facebook group, and a discussion-centric blog where members of the public are encouraged to comment and offer their own feedback.[32]

- *Education.* **The Teacher's Domain** is a free collection of over 2,000 standards-based digital resources covering a wide range of content for students and teachers.[33] Developed by the Boston public station WGBH and drawing from trusted sources such as *NOVA* and *A Science Odyssey*, Teacher's Domain offers a multimedia mix of video, audio, Flash Interactive images, articles, lesson plans, and student-oriented activities for the more than 333,000 registered users in over 177 countries worldwide. Specialized content include online professional development courses for K-12 science teachers in using science-related media from the collections, and an adolescent literacy media resource collection where teachers select a topic and students use the content for their assignments.

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[30] Indeed, a core function of public media has long been to reach these underserved segments. Public Broadcasting Act, 47 U.S.C. 396(a)(6) (2000) (citing as a policy goal to serve "unserved and underserved" audiences); QUALITY TIME?, *supra* note 16, at 22 (stating that an inherent component of the mission of public television is "its role as an alternative to commercial television, which is driven by concern for the marketplace, and therefore fails to capture many of the values we hold dear," and that "[p]ublic broadcasting has deep roots in education."); JOHN WITHERSPOON AND ROSELLE KOVITZ, THE HISTORY OF PUBLIC BROADCASTING 3, 69 (1987) ("Public broadcasting's programming mission traditionally has centered on alternative programming: programs which probably could not survive in the ratings-oriented commercial system, but which are perceived to be of value to particular audiences. . . . including programs for minorities; targeted groups, such as the elderly and children; and the handicapped."); Susan D. Charkes, *Editorial Discretion of State Public Broadcasting Licenses*, 82 COLUM. L. REV. 1161, 1165 (1982) (citing H.R. Rep. No. 572, 90th Cong., 1st Sess. 10-11 (1967), reprinted in 1967 U.S. Code Cong. & Ad. News 1799, 1801).

[31] Karen Everhart, *To Add Depth to Web News, Stations Try Going 'Vertical,'* Current, June 10, 2009, http://www.current.org/news/news0911argo.shtml (last visited Nov. 5, 2009).

[32] BEST PRACTICES, *supra* note 7, at 15.

[33] Comments of the Association of Public Television Stations, *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 2-3 (Fed. Commc'ns Comm'n July 21, 2009).

- *Bridging the Information Divide.* **One Economy Corporation's Public Internet Channel** is another example of a non-commercial, mission-driven project; it focuses on serving low-income users by combining video series about topics such as economics and family life with interactive resources. Web pages, for example, display a "toolbox" of options for learning, such as links to other articles and relevant information resources.[34] Its tutorial in everyday economics, for example, links to internal articles explaining how to file taxes online, how to properly write checks, and additional resources for understanding 401(k) plans.

2. Curate

As the amount of media content proliferates, trusted public media entities have an important role to play as information **curators.** They can use their brand, community connections, technology, and editorial capacities to raise the profile of important, reliable, and innovative content.[35] They also could play a vital, and currently unserved function, of maintaining public archives of audio and video of historic importance. This archive, which would make vast quantities of digital information searchable and available for use and re-use, could serve as an electronic public park.[36] Some of the most interesting curatorial efforts include:

- *Open platforms for submitting and vetting content.* **Public Radio Exchange (PRX)** curates independently produced radio content.[37] It now has more than 20,000 radio programs and approximately 1,000 producers available on the web site, and also hosts a social network to connect young radio producers and teachers, and users can interactively write reviews, create playlists, and offer feedback to public radio station producers.[38]

- *Aggregation of content for underserved populations.* **New America Media (NAM)** is a nationwide association of over 700 ethnic media associations that heavily relies on a networking component to curate high-quality content and reach diverse audiences.[39] It makes the content of an individual outlet more accessible to general audiences, and serves as a portal by which outlets and users can connect across shared concerns. It curates and organizes multimedia content by ethnicity, by particular news beats, and by

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[34] BEST PRACTICES, *supra* note 7, at 23.

[35] THE DIGITAL FUTURE INITIATIVE PANEL, THE DIGITAL INITIATIVE: CHALLENGES AND OPPORTUNITIES FOR PUBLIC SERVICE MEDIA IN THE DIGITAL AGE 42 (2005).

[36] Public media leaders have recently testified to the need for such an archive:

> Highly-trusted content of enormous value is languishing on the shelves of public television and radio stations. Billions of dollars worth of content assets, largely purchased with public money, are effectively lost to educators, inventors, government officials and private citizens because they have not been indexed and stored on accessible digital media. Worse still, some of these assets are in real danger of physical loss through disintegration and obsolescence.

Letter from Patricia Harrison, President and CEO, CPB, Paula Kerger, President and CEO, PBS, and Dennis Haarsager, Interim President and CEO, NPR, to President-Elect Barack Obama, Public Broadcasting Stimulus Request (Jan. 2, 2009), *available at* http://www.current.org/pbpb/documents/stimulus-request-Jan09.pdf.

[37] KNIGHT COMMISSION, *supra* note 3, at 51; PUBLIC MEDIA 2.0, *supra* note 3, at 14; Josh Silver, *Public Media's Moment*, *in* CHANGING PUBLIC MEDIA: PUBLIC INTEREST POLICIES FOR THE DIGITAL AGE 276 (2009).

[38] *Id.*

[39] New America Media Home Page, http://news.newamericamedia.org/news/ (last visited Oct. 9, 2009); BEST PRACTICES, *supra* note 7, at 24.

age, with a special YO! Youth Outlook project for youth media content with a strong new media focus.[40]

- *Subject matter specialization.* **Yale Environment 360** is a new media resource that provides in-depth knowledge and curates content about environment.[41] It fills an increasingly large gap of environment-centered reporting that is not covered by commercial media, attracting young journalists, experienced but out-of-work reporters, and a mix of policymakers and academics to create high-quality content on its multiformat site.

- *Crowdsourcing research.* **ProPublica**, a nonprofit news venture that produces investigative journalism on under-covered political stories, recently launched a new "distributed reporting" initiative that partners with other grassroots and news organizations to collect intelligence on stories and generate story leads.[42]

3. Connect

The Public Broadcasting Act specifically charged public media entities with the task of reaching out to the public and engaging people with media content and information.[43] Traditional methods of doing this have included the production of teaching guides and other ancillary program-related material, as well as the convening of community events.[44] Public media entities now can and must engage individuals and communities more vigorously across many platforms in the production, discussion, and use of media content. Broadband technology can connect expression to action; citizens to each other and to information; and local communities to national and global ones. Some promising new efforts include:

- *Social media and networking tools:* Individual reporters are using the popular microblogging site Twitter, for on-the-scene coverage, tag-based aggregation of links and commentary, and crowdsourced reporting.[45] NPR has recently participated in **Twitter Vote Report** and **Inauguration '09**, two innovative experiments that used Twitter to engage users in the election.[46] WNYC's **You Produce Wiki** program also asks listeners through a wiki module to contribute story ideas, suggest guests, and identify fresh angles to their stories.[47]

- *Games:* The Independent Television Service (ITVS) has produced a series of issues-oriented games, such as **World Without Oil**, where nearly 2,000 gamers from over 40 countries used new media tools to simulate a response to a sustained energy crisis, and

[40] *Id.*
[41] BEST PRACTICES, *supra* note 7, at 20-21.
[42] PUBLIC MEDIA 2.0, *supra* note 3, at 40.
[43] 47 U.S.C. 396(a)(8) (2000) (declaring public telecommunications services are valuable community resources for addressing national concerns and solving local problems through community and outreach programs).
[44] *See, e.g.*, Goodman, *supra* note 30, at 1469-71 (listing examples of public service media initiatives that reach out to schools, libraries, museums, and the workplace to engage a wider audience).
[45] BEST PRACTICES, *supra* note 7, at 36.
[46] *Id.* at 37.
[47] Silver, *supra* note 37, at 278.

FatWorld, an online video game about the relationship between American obesity, nutrition, and socioeconomics.[48] In **Games for Change**, media makers promote new kinds of games that engage contemporary social issues such as poverty, human rights, global conflict, and climate change.[49] It also serves as a knowledge base and resource hub to help organizations network and develop video game projects.

- *Maps:* Online and mobile maps and visualizations can also serve a variety of reporting and educational functions. **KCET Departures** designs its educational curriculum so that a map is the central point for learning, where students become "narrative cartographers" by mapping out their local community and embedding pictures, stories, and multimedia with the platform itself. WNYC's **Are You Being Gouged?** asked users to report prices of milk, beer, and lettuce onto a crowdsourced map.[50] In covering the economic crisis, WNYC also asked listeners to report stories of **Uncommon Economic Indicators**, which are then visually mapped by location.[51]

- *Mashups:* Offering tools by which users can remix video, audio, and text can also enable public media to encourage user participation and create content in fresh ways. ITVS's **Filmocracy** competition, for example, invited users to employ an EyeSpot online editing tool to create their own mash-ups of publicly available photographs, film footage, and video clips.[52]

- *Micro-storytelling kiosks:* A documentary project being developed by the Bay Area Video Coalition and journalist Pete Nicks on **Highland Hospital** in Oakland will involve kiosks set up in hospital waiting rooms across the country to capture and archive many diverse stories connected to the health care crisis.[53] The independent nonprofit **StoryCorps** also uses booths and kiosks to draw out the oral histories of thousands, many of which are then broadcast on public radio and the Internet.[54] CPB's **Public Broadcasting in Public Places**, a digital initiative bringing prime-time national PBS programming to new audiences, also uses interactive, digital kiosks. For example, these kiosks in California featured edited clips from PBS's California and American Dream Series.[55]

- *Higher education collaborations.* **KCET Web Stories** is a set of online videos and narratives that examine communities in Los Angeles, partnering with those communities for its stories. KCET worked with students from Occidental College to produce a story of the community of Eagle Rock.[56] It is currently building a curriculum for schools and

[48] *Id.*
[49] Games for Change: Real World Games, Real World Impact, http://www.gamesforchange.org/ (last visited Nov. 5, 2009).
[50] BEST PRACTICES, *supra* note 7, at 37.
[51] Silver, *supra* note 37, at 278.
[52] *Id.*
[53] Wendy Levy, *What R U Waiting For?*, July 14, 2009, Bay Area Video Coalition, http://www.bavc.org/index.php?option=com_content&task=view&id=1801&Itemid=1740.
[54] StoryCorps: The Conversation of a Lifetime, http://www.storycorps.org/ (last visited Nov. 5, 2009).
[55] Corporation for Public Broadcasting *Public Broadcasting in Public Places*, California Dream Series, http://www.californiadreamseries.org/pbipp.htm (last visited Nov. 5, 2009).
[56] EMBRACING DIGITAL, *supra* note 7, at 21.

colleges in those communities to educate students about the culture, individual lives, and history of their own neighborhoods. The station will then showcase the students' work product on its web site.

- *Institutional partnerships.* Public media entities increasingly design documentary films in order to stimulate dialog and connections among interested publics.[57] For example, the film **Lioness**, which appeared on the ITVS television series *Independent Lens*, probed the role of women in the military, and was screened by military bases, community centers, and veterans service organizations.[58]

- *Community partnerships.* In the San Francisco Bay Area, **KQED Quest** uses its website as a multimedia hub to integrate its radio, TV, and online coverage of the community, featuring regional maps, a community blog, partnerships and activities with local museum and universities.[59] Unique features include an interactive map with GPS technology identifying locations where QUEST segments were recorded; online nature hikes and walks; a community science blog with contributions from scientists, educators, and students; and discussion and photo sharing tools.[60] Philadelphia's WHYY radio station also partnered with the *Philadelphia Daily News* to produce a multimedia civic engagement blog, **It's Our City**, which solicits essays from users on topics related to city issues and leadership.[61]

- *State partnerships.* **Workforce Learning Link** is an educational initiative between the New Jersey Network and the New Jersey Department of Labor and Workforce Development.[62] It uses digital television technology, streaming video, computer software, and online and print materials to provide customized, interactive training services and educational opportunities for welfare registrants, dislocated workers, and other job seekers.

- *Social change partnerships.* **Saving the Sierra: Voices of Conservation in Action** documented what citizens were doing to preserve the Sierra Nevada mountains.[63] Starting first with community outreach, the project invited local community organizations in the Sierra Nevada area to participate. The result was a multimedia web site, which offered online web stories and news from local residents and groups engaged in conservation, and then a national public radio documentary. With its mission to "put a human face on public policy," **Active Voice** is an organization that uses film, television, and multimedia to highlight and humanize social issues such as immigration, criminal

[57] BEST PRACTICES, *supra* note 7, at 29.
[58] PUBLIC MEDIA 2.0, *supra* note 3, at 20; EMBRACING DIGITAL, *supra* note 7, at 21.
[59] BEST PRACTICES, *supra* note 7, at 30.
[60] Comments of the Association of Public Television Stations, *supra* note 33, at 4-5.
[61] WHYY It's Our City, http://whyy.org/blogs/itsourcity/ (last visited Nov. 5, 2009).
[62] Comments of the Association of Public Television Stations, *supra* note 33 *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 9 (Fed. Commc'ns Comm'n July 21, 2009).
[63] Jesikah Maria Ross and Catherine Stifter, *Collaboration in Action: Strategies for Developing and Distributing Multiplatform Documentaries*, American University School of Communication Center for Social Media, October 2009, http://www.centerforsocialmedia.org/resources/articles/collaboration_in_action_strategies_for_developing_and_distributing_multipla/ (last visited Nov. 5, 2009).

justice, health care, and sustainability. It works with media makers, funders, advocates, and thought leaders to develop key messages, repurpose digital content for distribution, and produce ancillary and educational resources, through national and local partnerships.[64]

- *Community media centers.* **channelAustin** is a non-commercial, community-based digital media center.[65] It provides access to open source Web tools, computer labs, Web streaming and digital cable distribution, and networked content management in order to target youth in after-school programs, neighborhood organizations, and non-profits for training.[66] It aims to be a regional hub for digital community media, connecting underdeveloped areas to cultural and economic opportunities in the rest of the city.[67]

B. Structure: Designing Systems of Digital Public Media for the 21st Century

We could fill this paper with many more examples like those above, and could cite to even more projects never launched because public media structures could not support them or broadband capabilities could not sustain them. The examples we included, and the ones we did not, say something about public media's potential to contribute to civic engagement and informed communities using broadband and other technologies. But even more importantly, they point to lost opportunities and latent capacities. Highly localized or niche experiments in best practices are not good enough. We could have much better systems of public media and much more powerful contributions to public life if there were reforms within the legacy public broadcasting structure and integration of the legacy system with non-broadcast public media entities. For this to happen, the Public Broadcasting Act must be amended – a point covered in the next section. As importantly, the practices of noncommercial media entities and the incentives created by their funders must change.

What would a fully realized system of digital public media look like? What structures would best support the functions of creating, curating, and connecting in service of an increasingly diverse population? What structures would generate commercially unviable content that is composed of "the reverent and the rude, the disciplined and the rambunctious – a celebration of American freedom in all its unpredictable varieties?"[68] What structures would allow us to "grasp the means to broaden our conversation to include the diverse interests of the entire society, in ways that both illuminate our differences and distill our mutual hopes?"[69]

We are only at the early stages of our research, but have undertaken to apply the basic principles of the Public Broadcasting Act in a digital context and based on a review of best

[64] Active Voice, http://activevoice.net/ (last visited Nov. 5, 2009).
[65] MARTHA FUENTES-BAUTISTA, BEYOND TELEVISION: THE DIGITAL TRANSITION OF PUBLIC ACCESS 1-2 (2009) (providing an in-depth examination of channelAustin as a case study for noncommercial digital community media centers) [hereinafter BEYOND TELEVISION].
[66] *Id.* at 14.
[67] *Id.* at 24.
[68] CARNEGIE II, *supra* note 1, at 300.
[69] *Id.*

practices in the field. The following characteristics are desirable in any future set of digital public media networks to finally realize the goals of the Act in the digital context – to "amend it" so that it engages the technologies and publics of today. The Commission can help to move the discourse and policies in the right direction.

1. Accessible

The Public Broadcasting Act envisioned a universally available service that met the needs of the entire population to engage with information.[70] To operationalize this ideal of public access and public service requires a degree of collaboration and openness that is today uncommon among public media entities. It requires that the public be able to easily access content created with a public service mission, especially burgeoning noncommercial journalism efforts. And it requires that those creating such content be able to easily access the public. Moreover, meaningful access means that public media must be available over all widely used communications platforms, particularly mobile devices.

There are some promising beginnings of collaboration. The first step is collaboration between public broadcasters; the second is collaboration between public broadcasters and other established public media entities, such as cable access stations; and the third is between these entities and the individuals and businesses that are driving digital innovation.

- *Station collaborations.* In Cleveland, WVIZ and WCPN (the city's PBS and NPR stations) jointly created **ideastream**, a public service multiple media organization that brings together different educational and public service media programs to better serve the Cleveland community.[71] It now includes local public radio and television channels, educational and public service cable channels, broadband interactive video distance learning, and Internet-only sources.

- *Public-private hybrids.* The **Bay Area Video Coalition Producer's Institute** pairs independent and public media makers with commercial Web tools to help them engage public participation by working with digital media.[72] For example, in iWitness, an online project of the PBS series *Frontline/World*, BAVC trainers worked with producers to build tools for citizen journalism by combining webcams with Skype, which resulted in unique pieces on the Johannesburg riots.

- *Community media partnerships.* Denver's **Open Media Project** is a collaborative initiative that connects six public access facilities to implement open source and Web-based tools for public access producers and staff.[73] It has helped other community media groups like channelAustin to develop an open source video content management system that allows users to conduct most of their transactions through the web.

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[70] 47 U.S.C. § 396(a)(9) (2000) (declaring it in the public interest for the government to ensure that "all citizens of the United States have access to public telecommunications services").

[71] Ideastream About Page, http://www.ideastream.org/ideastream/about/about_ideastream/ (last visited Oct. 9, 2009).

[72] PUBLIC MEDIA 2.0, *supra* note 3, at 26.

[73] BEYOND TELEVISION, *supra* note 65, at 13.

- *Involving new networks of users and makers.* The Public Broadcasting Act envisioned that public media would amplify voices seldom heard through commercial media.[74] Today, the possibilities for inclusion are greater than ever. Public media can, as **The Public Insight Network** (a partnership between American Public Media and Gather) has, create networks of individuals willing to serve as expert sources about particular trends in their cohorts and communities.[75] In San Francisco, **KQED** has been able to open access to many new voices by inviting community partners and individuals to write, for a $35 fee, and podcast content for the station's blog in arts, science, and food.[76] Native American Public Telecommunications also uses podcasts on **AIROS**, its Native radio station, to feature new voices in Native American media. The podcasts recently surpassed a quarter million (250,000) audio downloads.[77]

Public media was meant to provide access to news and information that the market did not support.[78] As several reports have recently noted, there are increasing and worrisome market failures in the production of investigative journalism.[79] Public media must be part of the solution, not only by increasing journalistic resources, but also by linking established media entities with new entrants to maximize the impact of journalistic efforts. The challenges of sustaining local journalism are formidable. As William Kling, President and CEO of Minnesota Public Radio, has put it, public broadcasting stations can serve as "base camps" for collaborative journalistic efforts.[80] One doesn't climb Mount Everest without the aid of base camps to assist in the ascent and one doesn't usually create sustainable journalistic organizations without a base level of infrastructure

Public broadcasting stations, as well as some public access cable facilities, can offer basic support for local journalism such as space, administrative support, and business experience. This use of legacy public broadcasting is happening in a few places, such as St. Louis where the public radio station, **KETC**, adopted several online initiatives with local online news and radio services, sharing content and expertise.[81] And when out-of-work local reporters received a grant to launch the *St. Louis Beacon*, an online news service, KETC provided rent-free office space and other resources.[82] In the San Francisco Bay Area, KQED and the University of California, Berkeley concluded that because "market mechanisms alone can no longer be relied upon to produce the quality journalism the Bay Area needs . . . public support must and will become a

[74] 47 U.S.C. § 396(a)(6) (2000) (declaring it in the public interest to encourage the development of programming specifically for the needs of unserved and underserved audiences, and especially children and minorities); *see also supra* note 30 (describing the drive to reach underserved audiences as a core component of public media).
[75] EMBRACING DIGITAL, *supra* note 7, at 25.
[76] EMBRACING DIGITAL, *supra* note 7, at 22.
[77] Native Producer Profile Podcasts, AIROS Audio, http://www.airos.org/podcasts_page#producer (last visited Nov. 5, 2009).
[78] *See supra* notes 29, 30 (describing the market failure of certain types of content covered by public media, and the role of public media in offering alternative programming that would otherwise not be commercially viable or available).
[79] *See supra note* 4 (citing several reports describing the current failure of a sustainable model for investigative journalism, and the growing public need for new business models and funders in that area).
[80] Conversation with Ellen P. Goodman (Sept. 30, 2009).
[81] A PBS 21ST CENTURY PLANNING INITIATIVE: TRANSFORMING NEWS & PUBLIC AFFAIRS ON PUBLIC MEDIA 15, Preliminary Draft (2009).
[82] *Id.* at 15.

critical part of the solution."[83] As a result, the two journalism institutions have formed the **Bay Area News Project**, a nonprofit, nonpartisan initiative to support high-quality, original, and local journalism about civic and community news in the Bay Area.[84]

The Public Broadcasting Act envisioned something beyond broadcasting as a platform even in 1967. The term it used was "public telecommunications."[85] Public media ought to be everywhere that the public is seeking media content. A popular iPhone application, **Public Radio Player** (formerly the Public Radio Tuner), takes an important step in this direction by offering a program guide, content streams from hundreds of public radio stations, a user support blog, and a locating feature that tunes in to public radio stations based on the phone location.[86] The Public Radio Player now has over 1.5 million user downloads.

2. Modular

There are many problems for which broadband-enabled public media could be part of the solution: for example, the needs for more local accountability journalism, better educational materials and engagement models, public service mobile communications, the development of youth and minority voices, and for the circulation of knowledge in the areas of science, technology, health, and the economy. Indeed, effective responses to these problems *require* public media participation in the sense that they depend on the intentional facilitation of communications about causes and solutions among those who suffer and those who can solve.

Not all public media entities should work on every problem. The public broadcasting system, as originally conceived, embodied a somewhat modular system broken into local and national components, with the desirable goal of realizing economies of scale on certain kinds of programming while encouraging local service.[87] All local entities in this system were to operate largely autonomously with the same functional obligations. This was in accordance with the realities of a mid-20th century mass audience. Today's technical capabilities and economic realities argue for increased modularity and specialization not only in the national/local dimension, but also in at least three other ways.

First, there is specialization by ***content.*** Some noncommercial broadcast stations and other public media entities are developing specialties in content "verticals," such as health and the environment.

To take health care issues as an example, a number of public broadcasting stations are developing depth in covering these issues in ways that neither market nor amateur media makers have, and engaging publics with the information, usually in partnership with health care providers and advocates. Some of these efforts have already been documented in this

[83] FAQ, Bay Area News Project, http://www.bayareanewsproject.org/faq/ (last visited Nov. 5, 2009).
[84] *Id.*
[85] 47 U.S.C. § 396(a) (2000).
[86] EMBRACING DIGITAL, *supra* note 7, at 28.
[87] 47 U.S.C. § 396(a)(3), (5), (8) (2000) (describing public telecommunications on distinctively "local and national levels" designed to address both "national concerns and local problems," yet focusing on the interests of those in "particular localities"); *see also* CARNEGIE I, *supra* note 11 (discussing the institutional landscape of public broadcasting in terms of a modular local and national approach).

proceeding's record[88] and include: **Be Well Kentucky** (television series, online outreach, and collaborative health literacy workshops for children, families, and minorities in partnership with community groups);[89] **LiveFIT NH** (similar combination of programs around childhood obesity);[90] the **Emergency and Community Health Outreach** program in St. Paul, Minnesota (similar combination of programs on public health topics such as flu prevention, translated into Spanish, Hmong, Khmer, Lao, Vietnamese, Somali).[91] Four years ago, the Digital Futures Initiative report also outlined how public broadcasting might advance national goals in health care and wellness, and its vision remains true today if still unimplemented.[92]

In addition, some non-broadcast entities are active in the field, such as **Watch-In! for America's Health,** a new educational initiative that gets citizens and organizations to sponsor screenings of the film *Money-Driven Medicine: What's Wrong with America's Healthcare and How to Fix It*. The distributor of the film is California Newsreel, the country's oldest nonprofit media resource center.[93] PRX is again demonstrating the utility of intentional aggregation of public media and government content with **Fluportal**, which curates public media and government-produced information, applications, widgets, and video content related to the H1N1 flu virus to inform individuals and support public media coverage of the flu pandemic.[94]

Second, there is specialization by ***function***. While we need local journalism in every community, local media entities can pool journalistic resources and exploit the journalistic depth of entities that specialize in journalism, wherever they are. Not every community needs to have a public media entity specializing in education. There could be a specialist in every state or even in fewer, depending on various state interests in partnering with public media for educational functions.

We are seeing the beginnings of educational specialization with national educational materials coming out of the **PBS Digital Learning Library**[95] and **Ready to Teach,**[96] while at the same time, a few local public media entities are concentrating in the educational sector. WGBH Boston's **Teachers Domain** is discussed above.[97] Also mentioned above is KQED's **QUEST**, a multimedia series exploring science, environment, and nature in Northern California.[98] It includes video and audio on demand, a blog, interactive maps with photos and

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[88] Comments of the Association of Public Television Stations, *supra* note 33, at 6.
[89] *Id.*
[90] *Id.*
[91] *Id.* at 7.
[92] THE DIGITAL FUTURE INITIATIVE PANEL, *supra* note 35, at 79-85.
[93] Join the Watch-In! For America's Health, Money-Driven Medicine, http://www.moneydrivenmedicine.org/watch-in (last visited Nov. 5, 2009); California Newsreel and Its Related Health Titles, Money-Driven Medicine, http://moneydrivenmedicine.org/about-cn (last visited Nov. 5, 2009).
[94] Flu Portal About Page, http://www.fluportal.org/about/ (last visited Nov. 5, 2009).
[95] Introducing the PBS Digital Learning Library, PBS Teachers, http://www.pbs.org/teachers/dll/ (last visited Nov. 5, 2009).
[96] Ready to Teach Grant Program, U.S. Department of Education, Sept. 18, 2008, http://www.ed.gov/programs/readyteach/index.html (last visited Nov. 5, 2009). These programs can help push educational standards and student-customized content into school curricula. Broadband can play a critical role in bridging the middle mile and delivery of high-definition quality, interactive content from these programs directly into the classroom.
[97] *See supra* note 33 and accompanying text.
[98] *See supra* note 59 and accompanying text.

text, and easy-to-embed videos. The station also offers lesson plans and trainings for teachers on how to use QUEST in the classroom. In Kentucky, the Kentucky Education Network has developed **LiteracyLink** to connect underserved adults with teachers for quality adult education and GED preparation, using virtual classrooms and other online learning tools.[99]

Third, there is specialization by ***region***. The broadcast markets defined in the 1950's do not necessarily reflect today's demographic needs for media services. Not all communities can support the content production we would like to see coming out of public media. Effective connections with the community can also be resource-intensive. In many cases, local communities should be aggregated by region with regional cooperation on content development, curation, and connection. For example, Minnesota radio station KAXE-FM led a collaboration with other regional organizations to create the **Community Supported Journalism** web site, a hyperlocal journalism resource with content from both professional and volunteer journalists, covering approximately a dozen small towns across Northern Minnesota that would otherwise have no local newspapers.[100]

In order to capitalize on the modular content and functional expertise in public media networks, these networks must actually function as ***networks.*** The content must be easily shared, extended, and modified and the models must be replicable, scalable, and sustainable nationwide. We will address these points in Subsection 4 (concerning "networked") below.

3. Engaging

Public outreach through digital media and real space public convenings implement the Public Broadcasting Act's concept of "outreach."[101] Imagined in the Act was a system in which media content became the basis of community action so that, even in the 1960's, public media entities would be responsible for fostering two-way communications and actual public engagement around narratives and information that mattered in people's lives. Digital public media entities must commit themselves to models of engagement and user interfaces that facilitate public use of, argument with, comment on, and re-creation of, transmedia communications. This kind of engagement is not only commanded by the Act, but reflects how media works in a broadband world.[102] And an engagement strategy is not something to be

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[99] *Id.* at 10. It is the product of the Kentucky Educational Television's partnership with the Kentucky Department of Education, the PBS Adult Learning Service, and the National Center on Adult Literacy. **Workplace Essential Skills** and **GED Connection**, two of the resulting instructional systems from this partnership, are now adopted by numerous other states.

[100] Community Supported Journalism, Northern Community Internet, http://www.northerncommunityinternet.org/community_journalism/ (last visited Nov. 5, 2009); *see also* Katie Donnelley, *Public Media Camp Round-Up*, Public Media 2.0 Showcase, Oct. 24, 2009, http://www.centerforsocialmedia.org/blogs/showcase/public_media_camp_round-up/ (last visited Nov. 5, 2009) (describing the Northern Community Internet Project, which includes the journalism web site, in greater detail).

[101] 47 U.S.C. § 396(a)(8) (2000).

[102] A number of legal and cultural scholars have described the reality of the "remix culture" in which individuals make transformative use of content available over digital networks. *See, e.g.*, LAWRENCE LESSIG, REMIX: MAKING ART AND COMMERCE THRIVE IN THE HYBRID ECONOMY (2008); CLAY SHIRKY, HERE COMES EVERYBODY: THE POWER OF ORGANIZING WITHOUT ORGANIZATIONS (2008); YOCHAI BENKLER, THE WEALTH OF NETWORKS (2006); Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. Rev. 1, 3 (2004) (emphasizing the cultural and participatory features of digital technology).

formulated after content is produced or information aggregated, but at the very beginning of the process.[103]

There is often an understandable concern about the line between objective media content and advocacy. The first thing to be said is that most engagement does not necessarily entail advocacy, but discourse. Public media ought to be dealing with controversial matters of public concern and ought to be reaching out to engage stakeholders and community members in debate over these matters. Indeed, public media entities are particularly needed as virtual and real spaces where respectful and nuanced discourse can occur free from the commercial pressures of generating ever more outrageous flares. Broadband capabilities enable much more widespread participation in this discourse and public media entities should ensure that their content is easy to engage with (both as a matter of technical content grabbing and as a matter of narrative construction) – they don't themselves have to manage engagement.

In addition, there is no reason to fear the use of public media material by advocates. There will be advocates on all sides of matters of public concern; public media is charged with providing nuanced analysis and investigation that both considers and complicates advocates' claims. It is to be expected – even desired – that public media productions will be folded into all forms of public debate, including highly charged ones. If such content is not part of the public discourse, public media is failing in its mission.

Effective engagement will often be a matter of linking media content with community activities and interests. **WYMS**, Milwaukee, has connected public radio broadcasts, blogs, and station events, also linking to local artist web sites, YouTube music videos, social networking tools, and discussions on videos about local and state-wide news.[104] The multiplatform engagement strategy has led to a 31% increase of 32,900 in listenership.[105] Public Broadcasting Atlanta recently launched **LENS**, a Local Educational Networking System, whereby residents can use a suite of social networking tools to connect with each other, neighborhood organizations, arts and educational resources, emergency services, and even with regional leaders such as the Atlanta mayor, who uses LENS as a direct pipeline between city residents and his office.[106]

Effective engagement components are also emerging from independent producers. **Participant Media** produces dramatic features and documentaries (including *An Inconvenient Truth*) that are designed in tandem with social action campaigns. The engagement portion of the work is integral to the production and not tacked on at the end of the process, and involves teams of nonprofits, social sector organizations, and corporations in establishing arenas for discussion and education.[107] ITVS' **Community Cinema Project** partnered with PBS to organize community screenings of films designed to reach diverse segments of the population, promote discussion of complex issues seldom explored in mass media, and enrich the cultural landscape

[103] *See, e.g.*, Corporation for Public Broadcasting, Request for Proposals For Public Broadcasting Stations to Take Part in the Community Engagement Initiative, Feb. 12, 2007, *available at* http://www.cpb.org/grants/cei/cei_rfp.pdf (seeking to develop new ways to make public media more significant local organizations in their communities).
[104] EMBRACING DIGITAL, *supra* note 7, at 21.
[105] *Id.*
[106] Lens on Atlanta (Beta): A Service of Public Broadcasting Atlanta Home Page, http://www.lensonatlanta.org/ (last visited Nov. 5, 2009).
[107] PUBLIC MEDIA 2.0, *supra* note 3, at 27.

with voices from underrepresented communities.[108] Now in its fifth season, the project has held some 1,000 events in over 50 cities attended by 100,000 participants—including 42% in seven markets identifying as persons of color.[109]

Public media entities also have a role to play in covering political elections by networking with other civic organizations, and with citizens themselves, in engaging their local public in the political system. One of the measures of political engagement is voting, and it is appropriate for public media to encourage and equip citizens to vote. The public station in Rochester, New York, did this through its **Overcoming Barriers to Civic Participation** to provide deaf and hard-of-hearing individuals with full access to information about political candidates and the election over the Internet.[110] It incorporated captioned content and a Civic Sense laboratory that experimented with techniques to improve online accessibility on its election web site.

Philadelphia's WHYY partnered with a good governance group, the William Penn Foundation, and other civic organizations to establish **TheNextMayor.com** in anticipation of the next mayoral election.[111] The interactive election project was designed to help ensure accountability, accuracy, and citizen feedback during the mayoral campaign. Project partners sought out and catalogued voter concerns, redefined issues, tracked each candidate's communications with different constituencies, posted every press release, and offered such detailed profiles that candidates were forced to become more accountable to their stated positions. The project had a significant influence on the community, with a skyrocketing number of visitors as election day approached. The site has since been renamed "It's Our City," and centers on city budget and other decisions.

4. Networked

For modular production to work, and for public media platforms to be maximally accessible and diverse, they need to be networked. This is perhaps the most important innovation to be wrought in public media structure. There is no doubt that the public broadcasting system has always valued connectivity. Indeed, the "interconnection system" that has facilitated distribution of the PBS national program schedule across the country is written into the law and supported by mandatory allocations from the CPB budget.[112]

Nevertheless, what we mean by a digital public media network, or set of interoperable networks, is quite different from the hub and spoke network structure of broadcasting in which a closed set of local entities download content from the national provider by virtue of their membership in a national organization. We are talking about lateral networks open to many

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[108] Community Cinema Events, Independent Lens, http://www.pbs.org/independentlens/getinvolved/cinema/ (last visited Nov. 5, 2009).
[109] Dru Sefton, *ITVS Brings Fresh Docs and Hot Popcorn*, CURRENT, Oct. 26, 2009,
[110] *Id.* at 9.
[111] Jan Schaffer, New Media Makers: A Toolkit for Innovators in Community Media and Grant Making 10-12 (2009).
[112] 47 U.S.C. § 396(g)(1)(B) (2000) (authorizing the CPB to establish and develop "one or more interconnection systems to be used for the distribution of public telecommunications services"); CPB Appropriations History 1969-2011 (on file with authors) (listing interconnection capital of up to nearly $40 million in one year since 2004).

kinds of entities, consisting not of membership or other contractual arrangements, but of technical platforms, customizable content modules, shared tools, and templates.

Shared platforms into which multiple nonprofit media producers and individuals can deposit content have the benefit of supporting, in turn, the creation of more, better, and innovative follow-on content. The Public Radio Exchange, discussed above, shows what can happen when public media content is made available over an open application program interface (API)[113] – namely, that content becomes much more accessible and useful to the public, and that innovators can write applications to curate and magnify the expressive value of public media content and follow-on creation.[114]

It is promising that NPR is planning to expand its **Public Media API** to include content from more public media organizations (e.g., APM, PRI, NewsHour, and others). This API will enable participants to share journalism and related content among themselves, which will require the development of concrete business rules to govern the exchange and use of content. The API also has the potential to link public broadcasters with new partners, with the API becoming a permeable barrier by which content can flow among public media entities and beyond. In another example of shared platforms, PBS is also in the process of implementing **Project Merlin**, an initiative to open PBS's COVE video streaming technology and encourages its adoption among public stations in order to localize news and foster the growth of local networks and communities.[115] With the increasing length and number of online visits directly related to availability of video on web sites, opening up video sharing technology can increase the reach and localization of public media.[116]

The use of tools that improve search and disaggregation of content support the curatorial functions of public media. If all public media producers use interoperable systems of content management that are recognized by each other, it becomes possible for public media to effectively aggregate mission-serving media and make it most useful for the public. Such tools provide the means for citizens and communities to interact with public media content and applications. An early experiment in a metadata and cataloging resource for public broadcasters was PBCore – the first online content publishing standard for public broadcasting. **PBCore 2.0** would make the metadata hub a part of the public media content workflow in enhancing the utility of content as it moves through production, post-production, and distribution.

Some of the most exciting developments in public media involve partnerships among community groups, schools and educators, government, non-profit institutions, and media producers of all kinds. The value of these projects could be magnified within and across communities if the projects were easily replicable and customizable. In other words, they must be capable of being scaled up and broken down. **KCET's Departures** program is producing a new media platform and curriculum for students to better understand the residents and cultural fabric of the local Los Angeles communities in which they live. Partnering with local high

[113] *See supra* note 37 and accompanying text.
[114] For a description of this kind of "distributed distribution" efforts in public media, *see* Dennis Harsaager, *NPR's Distributed Distribution Strategy*, Technology360 Blog, Sept. 8, 2008, http://technology360.typepad.com/technology360/2008/09/nprs-digital-di.html (last visited Nov. 5, 2009).
[115] Steve Behrens, *PBS Goal: Turn Stations' Sites into Internet 'Success Stories'*, CURRENT, Sept. 21, 2009, http://www.current.org/web/web0918merlin.shtml (last visited Nov. 5, 2009)
[116] *Id*.

schools and colleges, KCET allows students to communicate with teachers through a wiki-based environment, upload their own stories onto a map, and engage with the narratives of others. KCET has designed this curriculum to be a template for other communities as well. The templates for the program, as well as the content, will be essential in replicating the Los Angeles experiment elsewhere.

Of course, the sharing of content and tools across networks implicates intellectual property rights management. This is a complex subject beyond the scope of these comments. It is clear that enabling content to flow demands reasonable upstream permissions from third-party rights holders with respect to media inputs. Public media makers must have adequate, affordable, and efficiently clearable rights if they are to archive content and make it widely available for personal noncommercial use, educational use, other mission-related uses, and follow-on creation. At the same time, public media entities should be subject to reasonable downstream access rights so that the public and other media makers have access to the content that public media creates. Those who fund public media, including CPB and foundations, should insist that public media products, from copyrighted narratives to code, should be as close to open-source as possible in terms of allowing users to stream, download, remix, and innovate.[117]

5. Diverse

Diversity is a value central to the Public Broadcasting Act. Public media is supposed to serve underserved audiences.[118] Ethnic minorities have always been among the underserved audiences, as are children and youth. This service disparity seems to be perpetuated in the broadband world.[119] There are other dimensions of diversity that need focused attention and intentional development in all aspects of public media functions. As a group of diverse public media producers wrote in an "open letter" to the public media community earlier this year: "The commitment to embrace diversity as a core principle of our work requires that we engage more deeply with its complexity. In addition to race and ethnicity, diversity includes perspectives and identities generally underrepresented in our mainstream media due to geography, income and education levels, physical disability and sexual preference."[120]

Public media to date has not done an adequate job of serving underserved audiences, notwithstanding many efforts in that direction. Public media voices, workforce, and targeted

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[117] It is not possible to deal in absolutes because public media entities themselves are bound by myriad and complicated licenses imposed by the owners of upstream components of their creations, including writers, actors, and owners of stock footage, still photographs, and music. For a description of some of these copyright complexities, see Digital Learning Case Study: WGBH and the Public Broadcasting Statutory Exceptions, http://www.apts.org/members/coalitions/digitalrights/loader.cfm?url=/commonspot/security/getfile.cfm&pageid=22536_1.pdf.

[118] 47 U.S.C. 396(a)(6) (2000) (citing as a policy goal to serve "unserved and underserved" audiences).

[119] BROADBAND IMPERATIVES FOR AFRICAN AMERICANS: POLICY RECOMMENDATIONS TO INCREASE DIGITAL ADOPTION FOR MINORITIES AND THEIR COMMUNITIES 3-4 (2009), *available at* http://broadbandimperatives.org/images/MTI_Broadband_Report_Web.pdf (noting a persistent disparity in broadband adoption between minority populations and other groups).

[120] An Open Letter to Our Public Media Colleagues, *supra* note 4, at 4; *see also* Letter from Patricia Harrison, President and CEO, CPB, Paula Kerger, President and CEO, PBS, and Dennis Haarsager, Interim President and CEO, NPR, to President-Elect Barack Obama, *supra* note 36, at 1 (citing the need for "media 2.0 technology" to reach audiences from diverse ethnicities and economic and social backgrounds).

public needs are all insufficiently diverse.[121] More innovation and more risks are necessary in diversifying the reach and representation of public media, and the broadband proliferation of communications channels can support strides in this area.

One way to increase diversity of voice is by opening up, and yielding some control over, public media platforms. Chicago's WBEZ created **Vocalo** by splitting off one of its repeaters to target an audience formerly unreached by the station.[122] With a tag line of "You Make It. We Broadcast It," Vocalo has no programming. Instead, it offers a partially user-created platform by which users can upload content, and participate in a continuous talk-based stream exclusively focused on the culture, issues, and music of the metropolitan area.

Another way to increase diversity is to integrate a concern for diverse voice and experience into the fabric of content development. For its latest news program **The Takeaway**, public radio station WNYC in New York aggressively sought out diversity in assembling its production team. It advertised within the Asian American Journalist Association, Spellman College, Native American Journalist Association, National Association of Black Journalists, National Association of Hispanic Journalists, and the South Asian Journalist Association to recruit new staff based on journalistic expertise, work ethic, intellectual curiosity, and openness to new media. The program now has one of the most diverse production teams in public radio.[123]

Technology choices are central to any diversity-enhancement effort. It turns out that users of online public media tend to be far more diverse than of linear broadcast programming.[124] And online public media resources prove to be particularly important to minority Internet users. For example, African Americans use PBSkids.org 16% more than they use other U.S. web sites; for Latinos, the figure is 98% more, and for Asian-Americans, 142% more.[125] Public media must reach more diverse populations, and particularly younger ones, by pushing the envelope on new media formats. According to the Open Letter on Diversity,

> America's younger and more ethnically diverse audiences are public media's great, untapped resource. Young viewers and listeners are multilingual and multicultural, passionate bloggers and voracious content seekers. The increasingly commercial Internet positions them primarily as consumers, but they are hungry to exercise their power of choice as global citizens and generators of media content in the new digital landscape.[126]

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[121] For example, African Americans are only about 80% as likely to be found in public radio's weekly audience, and Hispanics only 42% as likely, relatively to the proportion of their respective ethnicities in the general population. GROW THE AUDIENCE, *supra* note 3, at 12, 13. The PBS audience profile is also skewed to those under age 7 and over age 46, largely missing the adolescent, young adult, and younger middle-aged populations. Silver, *supra* note 31, at 279. The media industry at large is also relatively un-diverse —minority journalists have never accounted for more than 14% of the total professional print journalism community. KNIGHT, *supra* note 3, at 54. In television and radio, less than 4% of commercial TV stations and less than 8% of commercial radio stations are owned by people of color. Silver, *supra* note 31, at 280.

[122] GROW THE AUDIENCE, *supra* note 3, at 19.

[123] *Id* at 16.

[124] For example, two-thirds of web visitors to PBS's general audience site are under 45 years old, constituting a "whole new audience" for public stations, according to PBS Vice President Jason Seiken. Behrens, *supra* note 115.

[125] Silver, *supra* note 37, at 281.

[126] An Open Letter to Our Public Media Colleagues, *supra* note 4, at 4.

Public media should help them.

Network platforms and tools are essential in this effort. **GenerationPRX,** for example, is a project of PRX that focuses specifically on youth-produced radio.[127] PRX networks with an advisory board of experienced broadcasters and youth radio producers to create a space for youth to share ideas, strategies, and materials, and to offer peer feedback and review from a Youth Editorial Board. The site helps to distribute youth radio by building an online catalogue that is accessible to stations, producers, and listeners through PRX.

Finally, of course, the selection of subject matter and associated engagement tools in public media content will affect the diversity of the public served. One successful recent undertaking was **The Masculinity Project**, based on a partnership between the National Black Programming Consortium (NBPC) and ITVS. The multiyear initiative enlists community partners to help produce dozens of short films—original and re-versioned—and audio pieces that integrate participatory tools and multiple platforms to showcase myriad perspectives on race and gender.[128] The project's robust Web site also incorporates content-relevant blogs and discussion forums, creating a virtual community record of the real, rather than stereotypical, issues affecting African-Americans in the United States. The Project draws heavily upon participatory tools and platforms to showcase different perspectives on race and gender.

6. Innovative

"Experimental" is a word from the Public Broadcasting Act that is often forgotten and important to remember. Public media should be, and sometimes is, an incubator of experiments that market and non-market forms of amateur production will not support. It is also a proving ground for experiments – in content, engagement practices, technological innovations, narrative forms, or business models – that can then go on to influence commercial practice. For better and for worse (as experimentation often is), public broadcasting incubated reality television as a narrative form. It also incubated the Children's Television Workshop as a private nonprofit engaged in the production of children's television for public media.[129] And its early experiments in fostering community dialogue on race pioneered a model of sustainable, diversified community engagement practices now common in public broadcasting, and in documentary filmmaking more generally.[130] As the journalism sector seeks models for sustaining newsgathering functions, public media entities are in a good position to innovate.[131] They have

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[127] EMBRACING DIGITAL, *supra* note, at 26-27.

[128] BEST PRACTICES, *supra* note 7, at 22.

[129] *See* Alison Alexander, *Children's Television Workshop*, The Museum of Broadcast Communications, http://www.museum.tv/eotvsection.php?entrycode=childrenste (last visited Nov. 5, 2009).

[130] BARBARA ABRASH, THE VIEW FROM THE TOP: P.O.V. LEADERS ON THE STRUGGLE TO CREATE TRULY PUBLIC MEDIA 10-11 (2007).

[131] DOWNIE & SCHUDSON, *supra* note 9, at 12 ("[D]igital technology—joined by innovation and entrepreneurial energy—is opening up new possibilities for reporting"); NEW BUSINESS MODELS FOR NEWS, Project Update, CUNY Graduate School of Journalism 4-5, 162 (2009) (discussing possible models for publicly supported journalism, and volunteer community news websites based on a public radio model); WESTPHAL, *supra* note 4, at 5, 8 (quoting Thirteen/WNET New York President Neal Shapiro that "public broadcasting is one area where you can produce quality journalism that has a tremendous reach," and discussing hybrid models based on public broadcasting models).

long relied on voluntary financial contributions to support their work and now should illustrate new ways of "crowdfunding" media services.[132]

Innovation in content, delivery, and engagement strategies will depend on better broadband. The innovative use of games, for example, to engage students in connecting historical narratives to their own moral choices,[133] requires robust broadband to the school and to the home. Public media could perform almost all of its functions better if the nation had faster and universal broadband. We will not belabor this point because broadband needs are well documented in the record.[134] A few examples will suffice to show how much of what public media does, and should in the future do, depends on better broadband.

- Hosted by Nashville Public Television, **Next Door Neighbors** is a multi-faceted community project that raises awareness of Nashville's relatively large immigrant and refugee communities. Its documentary series, panel discussions, community forums, and literacy workshops offer ways to learn of these new communities and the changing social, economic, and cultural life of the city. Next Door Neighbors relies heavily on broadband to reach its audience, most of which access the content online. The lack of access to broadband in rural areas of Middle Tennessee – areas that now include an increasing number of Somali, Hispanic, and other immigrant contingencies – has made it difficult to be able to reach these audiences. Next Door Neighbors has also had to find alternatives to uploading and streaming their videos because of prohibitive streaming costs.[135]

- **Skylight Pictures** is a public media group that produces documentary films on issues of human rights and social justice. Skylight Pictures would like to develop more robust video delivery systems for its films and ancillary modules it produces for high schools and universities. But the limited broadband speeds of the participating classrooms and communities (usually T1 or T2 connection speeds) have prohibited seamless viewing and high resolution. Streaming costs and limited broadband speeds for uploading as well as downloading have also limited Skylight Pictures' effectiveness and reach.[136]

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[132] Public media programming that are already raising funds online include public radio shows *Living on Earth* and *This American Life*, as well as public television's *In the Life*. Karen Everhard, *ReelChanges Tests 'Crowdfunding' of pubTV Production*, CURRENT, Mar. 30, 2009, http://www.current.org/funding/funding0906crowdfunding.shtml (last visited Nov. 5, 2009) (listed on side banner of website).

[133] *See, e.g.*, Facing History and Ourselves: Helping Classrooms and Communities Worldwide Link the Past to Moral Choices Today, http://www.facinghistory.org/ (last visited Nov. 5, 2009) (an international educational and professional development nonprofit organization aiming to engage students of diverse backgrounds in issues such as racism, prejudice, and anti-Semitism through multimedia).

[134] Public media and nonprofit media organizations have also filed FCC comments noting the need for broadband in their underserved communities, and for educational and social development among children. *See, e.g.*, Reply Comments of Native Public Media and the National Congress of American Indians, *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 26 (Fed. Commc'ns Comm'n July 21, 2009) (citing only six Native owned public radio stations that are streamed onto the Internet today); Letter from Common Sense, *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 1-3 (Fed. Commc'ns Comm'n June 8, 2009) (detailing why broadband is so critical to improving education for American children).

[135] Next Door Neighbors, http://www.wnpt.org/productions/nextdoorneighbors/ (last visited Nov. 5, 2009); Conversation with Kevin Crane, Vice President of Content & Technology, Nashville Public TV (Oct. 6, 2009).

[136] Skylight Pictures, http://skylightpictures.com/ (last visited, Nov. 5, 2009); Interview with Paco de Onis, Producer, Skylight Pictures (Sept. 18, 2009).

7. Transparent

If the purpose of public media is to increase public knowledge and democratic engagement around important issues in the lives of individuals and communities, it seems obvious that there should be public knowledge and engagement around public media operations themselves. To this end, the Public Broadcasting Act requires that CPB meetings are open to the public and imposes a range of reporting requirements on public broadcasting stations.[137] Much more can be done by, and should be expected of, public media entities in terms of transparent operation. Two areas in particular deserve special mention.

Journalistic transparency. Perhaps the greatest value of the legacy public broadcasting system resides in the trust reposed in its national brands by the public.[138] These brands are trusted to signify thoughtful, high quality, and thoroughly reported information, as well as narratives that speak a truth.[139] It is the mission-orientation of public media – its intentional advancement of public engagement around important topics – that undergirds the trust it enjoys. The desert and preservation of this trust requires transparency in the news gathering process. Public media participants ought to set the standard for transparency in sourcing and personal affiliations.[140] It is not always possible to suppress bias, but transparency helps to reveal it and allows the public to interrogate content for slant and accuracy – the very kind of engagement that supports democratic practices.

Funding transparency. The second kind of transparency that should be increased throughout public media networks concerns funding. While there is plenty of public reporting about government and private grants, the reporting does not support easy public access and analysis. In addition, much of the reporting from CPB grantees back to CPB never sees the light of day. If it did, in ways that were user-friendly and machine readable, the data could help the public to assess the efficacy and direction of public media funding. The reporting required of CPB grantees is already onerous and CPB reporting to Congress is also heavy. We believe it unlikely that increasing these requirements would serve the public. However, changing the

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[137] 47 U.S.C. § 396(g)(4) (2000) (mandating that "[a]ll meetings of the Board of Directors of the Corporation, including any committee of the Board" be open to the public).

[138] In 2009, Americans ranked PBS as their most valued institution, second only to the military, and put NPR third, tied with law enforcement—the sixth consecutive year where Americans ranked PBS as No. 1 in public trust, above newspapers, commercial broadcasters, the judicial system, and the federal government. Silver, *supra* note 37, at 263; *see also* BEST PRACTICES, *supra* note 7, at 25 ("surveys show that public broadcasting is among the most trusted sources of information about science").

[139] GROW THE AUDIENCE , *supra* note 3, at 1 (citing the "quality, depth, [] authenticity, close connections to local communities, and leverage and scale of multiple national networks" as reasons for public radio's strong trust factor among its audiences).

[140] The value of transparency in new media has not been lost on journalism commentators. *See, e.g.*, David Weinberger, *Transparency is the New Objectivity*, Sunlight Foundation Blog, July 19, 2009, http://blog.sunlightfoundation.com/2009/07/19/transparency-is-the-new-objectivity/ (last visited Nov. 5, 2009) (suggesting that transparency in fact "subsumes" objectivity in capturing a reliability in new media that objectivity once did in old media); Dan Gilmore, *Washington Post, Social Networks and Transparency*, Mediaactive Blog, Sept. 30, 2009, http://mediactive.com/2009/09/30/washington-post-social-networks-and-transparency/ (last visited Nov. 5, 2009) (arguing that transparency will become "one of journalism's core principles in this new era"); Matthew Ingram, *Is Transparency the New Objectivity? 2 Visions of Journos on Social Media*, Nieman Journalism Lab Blog, Sept. 28, 2009, http://www.niemanlab.org/2009/09/is-transparency-the-new-objectivity-2-visions-of-journos-on-social-media/ (last visited Nov. 5, 2009) (reviewing past debates about whether transparency should become a laudable virtue in the media industry).

reporting criteria and improving ease of access to what is reported would make much more meaningful requirements that are supposed to serve transparency goals.[141]

III. RECOMMENDATIONS SUPPORTING NEW SYSTEMS OF DIGITAL PUBLIC MEDIA

Significant changes are necessary before public media can be the engine that it should be for broadband adoption and full public participation in the information age. We expect in the future to support these general recommendations with more detailed proposals. Given the urgency of the Commission's task in drafting the National Broadband Plan, however, we wanted to lose no time in identifying in broad brush what we believe should be part of the Commission's Broadband Plan.

A. Acknowledge the Role of Enhanced Digital Public Media Networks in the Broadband Future

Although there have been many private-sector reports discussing the migration of public broadcasting to a more inclusive concept of public media, the federal government itself is still on record as referring only to public broadcasting. There is an obvious mismatch between a discourse about the broadband future and one about the broadcasting past. Of course, it is taken for granted that the term "public broadcasting" is meant to include broadband components, but the continued and habitual placement of broadcast technology at the core of the public service media mission retards imagination and progress. The FCC could do much good by helping to reframe the discourse around public service media in a technology-neutral way (indeed, as it was originally framed in the Public Broadcasting Act, as including public telecommunications). It could do this by simply identifying public media as a mission-driven system of networks that includes, but is not limited to, the legacy public broadcasting system.

[141] President Obama's statements promoting transparent policies in his Administration are consistent with this position. Transparency and Open Government: Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 4685, 4685 (Jan. 26, 2009), *available at* http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/ ("Transparency promotes accountability and provides information for citizens about what their Government is doing. Information maintained by the Federal Government is a national asset. . . . Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public."); Freedom of Information Act: Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 4683, 4683 (Jan. 26, 2009), *available at* http://www.whitehouse.gov/the_press_office/Freedom_of_Information_Act/ ("A democracy requires accountability, and accountability requires transparency. . . [A]gencies should adopt a presumption in favor of disclosure . . . . [and] take affirmative steps to make information public"); *see also* Timothy Hay, *America's CTO Aneesh Chopra Challenges Tech Sector*, Wall St. J. Blogs, Sept. 19, 2009, http://blogs.wsj.com/venturecapital/2009/09/19/americas-cto-aneesh-chopra-challenges-tech-sector/ (last visited Nov. 5, 2009) (describing Obama Administration Chief Technology Officer CTO's exhortations for improved government transparency and digitized, wider access to government data as key for improving government activities).

In its discussion of public media, the Commission should note the ways in which the services discussed in these comments, and in many other papers, can help to spur broadband demands and contribute to national public purposes. The FCC should briefly articulate the contributions that systems of digital public media, properly configured and committed, could make to the goals of the broadband project. Many in the public media and communications policy communities are working towards change; a clear statement from the FCC, as part of its broadband policy strategy, that digital public media could contribute significantly to the broadband promise would motivate even more aggressive efforts in the public interest.

B. Recommend to Congress that It Amend the Public Broadcasting Act

We need a new Public Media Act that preserves the central aspirations of the Public Broadcasting Act, but implements them in a technology-neutral way and emphasizes the structural principles appropriate for digital networks that we have outlined above.

The most significant failing of the existing Act is that it creates an entitlement to scarce federal public media funding for radio and television broadcast licensees, and does not create a corresponding pool of funding for entities operating on other platforms. As a result, it locks many public media entities into technology some should abandon, and it locks out many public media entities qualified to compete for federal funds. In addition, the Act fails to set meaningful expectations for public media entities that receive federal funding – expectations that would generate better public service in creating, curating, and connecting. More specific and measurable expectations derived from the kind of structural principles we lay out above need not be written into the Act itself. However, CPB – renamed and restructured to reflect today's digital realities – should be charged with implementing clear performance guidelines.

By the same token, copyright laws that were written to support public broadcast distribution of content need to be updated to accomplish the same goals on digital networks.[142] The special copyright provisions that apply to public broadcasting are designed to reduce transaction costs entailed in clearing the upstream rights to music and other material included in content transmitted over public broadcasting airwaves.[143] As the airwaves become only one of many distribution mechanisms, and as it becomes possible for public media entities to expand access to archival content and distribute content to individuals every which way, these provisions do less and less. They hardly reduce transaction costs in the rights clearance process, which now needs to be conducted for all media, not just broadcast. Moreover, they do very little to unlock access to thousands of hours of important public media content now. Copyright provisions should therefore be updated to reflect the reality of digital media, and today's larger media-

[142] 17 U.S.C. § 114(b) (2006) (granting public broadcasters the right to use sound recordings without permission or in educational television and radio programs that are not commercially distributed); 17 U.S.C. § 118(d) (2006) (granting a compulsory license to use "published nondramatic musical works and published pictorial, graphic, and sculptural works"); Goodman, *supra* note 19, at 270 (discussing how technological and business changes have rendered special copyright benefits to public broadcasters increasingly useless); William W. Fisher & William McGeveran, *The Digital Learning Challenge: Obstacles to Educational Uses of Copyrighted Material in the Digital Age* 6, 8 (The Berkman Center for Internet & Society Research Publication No. 2006-09, 2006) (finding that copyright laws and practices such as unclear or inadequate copyright provisions, extensive digital rights management, onerous rights obtainment processes, and unduly cautious rights gatekeepers are "among the most important obstacles to realizing the potential of digital technology in education").

[143] Goodman, *supra* note 19, at 13-14.

making ecosystem. The *quid pro quo* for any expansion in copyright benefits for public media entities is that the works they create should be as open as possible to downstream uses.

C. Recommend to Congress that It Conduct Pan-Governmental Audit of Public Service Communications Spending

In addition to the annual federal appropriation to CPB, and other appropriations to public broadcasting stations and producers, many federal dollars are spent on public service communications. The CDC produces media on the flu virus.[144] The Department of Agriculture produces media on nutrition.[145] The Federal Trade Commission offers resources and media on identity theft.[146] The Office of Citizen Services hosts a kids.gov web site, with interactive activities and links to government pages for learning about topics such as agriculture and farming, animals in national zoos, political systems and governance, careers, and profiles of other states.[147] These are all examples of federal spending on what are essentially public media projects, all designed to inform and engage the public.

These expenditures ought at a minimum to be more transparent. Like the federal government's IT expenditures, they ought to be made subject to public inquiry and scrutiny.[148] Moreover, an audit might well reveal that funds spent on public service communications could be more effectively leveraged if that content were networked over public media platforms. Some of this material should be archived and extended through public media applications and tools. Some of it should be part of locally based public engagement campaigns that exploit the connectivity of public media entities. Some should be developed in coordination with, or build upon, innovative public media strategies. Given systems that are modular and networked, there is every reason to believe that the public would get more value from government-supported communications extended over these networks.

D. Initiate a Proceeding on Noncommercial Television Spectrum

Both before and after the FCC's $20 billion auction of television broadcast spectrum in 2008,[149] there have been calls to reallocate more of the TV spectrum to wireless broadband uses.[150] The Commission may well identify spectrum scarcity as one of the main impediments to

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[144] *See, e.g.*, CDC Seasonal Influenza (Flu), Centers for Disease Control and Prevention, Oct. 20, 2009, http://www.cdc.gov/flu/ (last visited Nov. 5, 2009); Flu.gov: Know What to Do About the Flu, http://flu.gov/ (last visited Nov. 5, 2009) (an interagency government web site providing comprehensive, government-wide information on pandemic influenza and avian influenza).

[145] *See, e.g.*, Nutrition.gov: Smart Nutrition Starts Here, Nov. 2, 2009, http://www.nutrition.gov/nal_display/index.php?info_center=11&tax_level=1 (last visited Nov. 5, 2009); MyPyramid.gov, Sept. 17, 2009, http://www.mypyramid.gov/index.html (last visited Nov. 5, 2009).

[146] Fighting Back Against Identity Theft, Federal Trade Commission, http://www.ftc.gov/bcp/edu/microsites/idtheft/ (last visited Nov. 5, 2009).

[147] Kids.gov: The Official Kid's Portal for the U.S. Government, http://www.kids.gov/ (last visited Nov. 5, 2009).

[148] *See, e.g.*, Federal IT Dashboard, *supra* note 21; *supra* note 140 and accompanying sources on the value of transparency, not only in governance and funding, but into the sourcing, disclosure in personal affiliations, and other practices in reporting and media making.

[149] Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, *Second Report & Order*, 22 F.C.C. R. 15,289 (2007), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-132A1.pdf.

[150] *See* Ellen P. Goodman, *Spectrum Auctions and the Public Interest*, 7 J. ON TELECOMM. & HIGH TECH. L. 101, 103-109 (2009) (discussing the 700 MHz auction and the high level of interest in using the spectrum for wireless

better broadband in its Broadband Plan.[151] At the same time, there have been repeated proposals over the past several decades since spectrum auctions were first introduced to use auction revenues to support public broadcasting.[152] We believe the time is nearing for the Commission to explore both of these options, and perhaps to link them, recognizing that statutory authority would be necessary for any diversion of spectrum auction revenue. Noncommercial television spectrum could serve as the laboratory for more extensive efforts to reallocate some of the broadcast television spectrum. The reallocation of some of the reserved band, under conditions which ensured that public media resources would remain in the local communities of license, would benefit both public media and larger spectrum policy goals.

This exploration should take place in the context of some broader principles and values.

The first principle is ***spectrum flexibility***. The Commission has long supported spectrum flexibility and the principle is codified in the Communications Act as a central feature of digital broadcast television.[153] The hope is that if spectrum licensees have broad flexibility to use or sell wireless usage rights, spectrum use will be efficient.

The problem with this theory in the case of noncommercial television licensees is that they lack the risk capital that may be necessary to put spectrum to new and possibly more efficient experimental uses. As for selling usage rights, there are institutional and political forces that will likely deter efficient sales or leases. Although it would require more research to know

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broadband purposes). Advocates on multiple sides of the industry agree on the need for allocating more spectrum to wireless use. *See, e.g.*, NATIONAL BROADBAND PLAN WORKSHOP – SPECTRUM 121, Federal Communications Commission, Sept. 17, 2009, *available at* http://broadband.gov/docs/ws_25_spectrum.pdf (quoting New America Foundation Vice President Coleman Bazelon in acknowledging the need to reallocate broadcast spectrum, as well as spectrum from other bands); Comments of CTIA—The Wireless Association, *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 17 (Fed. Commc'ns Comm'n July 21, 2009) (discussing the shortage of spectrum and the need to reallocate broadcast spectrum); Reply Comments of Free Press, *In re* A National Broadband Plan for Our Future, GN Docket No. 09-51, at 56 (Fed. Commc'ns Comm'n July 21, 2009).

[151] *See, e.g.*, Blair Levin, *You Can't Coach Height: A Winning Spectrum Strategy*, Broadband.gov Blog, Oct. 29, 2009, http://blog.broadband.gov/?p=617 (last visited Nov. 5, 2009) (describing the lack of available spectrum for mobile broadband as "one of the biggest challenges we face in meeting the broadband needs of this nation"); Amy Schatz, *FCC Considers Shifting Some TV Airwaves to Broadband*, WALL ST. J., Oct. 28, 2009, http://online.wsj.com/article/SB10001424052748703574604574499730302393274.html (last visited Nov. 5, 2009) (quoting FCC national broadband chief Blair Levin as saying, "The record is very clear that we're facing a looming spectrum gap," and that the FCC is "looking at everything, including broadcasting" airwaves).

[152] *See* Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, 14 F.C.C.R. 19,868, 19,870 (1999) (providing that "[f]lexible allocations may result in more efficient spectrum markets"); Silver, *supra* note 37, at 270 (suggesting reserving a percentage of all future spectrum auction revenue as a possible means of ensuring funding for public media); THE DIGITAL FUTURE INITIATIVE PANEL, *supra* note 35, at 115 -16 (suggesting allocating federal revenue source such as spectrum auction to fund public media); Steve Behrens, *Fields Proposes Trust Fund, But Caps Its Size at $1 billion*, CURRENT, March 11, 1996, *available at* http://www.current.org/mo/mo605.html (last visited Nov. 5, 2009) (describing a legislative proposal to fund the CPB through revenue generated from spectrum auctions). Indeed, even in 1979, *Carnegie II* was proposing that spectrum fees be imposed to support public broadcasting. CARNEGIE II, *supra* note 1 (recommending the establishment of a fee on licensed uses of spectrum, so that income from the fee can be used for public broadcasting).

[153] *See, e.g.*, *In re* Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Second Report And Order, Order On Reconsideration, and Second Further Notice Of Proposed Rulemaking*, 19 F.C.C.R. 17,503 (July 8, 2004) (expanding the availability of spectrum leasing to more wireless services and devices); 47 U.S.C. § 334, 336 (2006) (describing broadcast spectrum flexibility).

for sure, it seems unlikely that noncommercial license holders, particularly when they are state universities and other governmental instrumentalities, operate in a structure that incents entrepreneurial entry into spectrum leases or sales. Even where licensees might be interested in such transactions, political pressure from inside and outside of the public broadcasting system to retain these assets for public broadcasting purposes would reduce the likelihood of efficient exchanges. If, however, licensees were able to relinquish spectrum rights to the FCC in exchange for the cash value of the spectrum asset for reinvestment into community media needs, the advantages of spectrum flexibility might be realized without compromising the mission or public broadcasting or raising the ire of its supporters (or providing ammunition to its opponents).

The second principle is ***spectrum efficiency.*** In some markets, there are noncommercial television stations with significantly overlapping signals and services that are not entirely differentiated. Although the need for more differentiated service in these markets has long been recognized, resource constraints make this a difficult goal. Where the services are not differentiated, it may be possible to combine stations with little loss of service to the public and significant gains in spectrum efficiency. There are institutional and political reasons why this kind of efficient merger does not happen. Even where mergers do take place, the merged entity has no incentive to relinquish the license and spectrum asset of one of the stations.[154] A Commission transition plan that encouraged such mergers while allowing the merging entities to plow the asset value of the returned license back into the community would advance spectrum efficiency goals without sacrificing public service goals.

The third principle is ***public service.*** It may be that allowing licensees to retain some of the asset value of their license as an incentive for facilitating a reallocation of broadcast spectrum is the appropriate model for all television licensees. At the very least, the public service responsibilities of noncommercial licensees make it appropriate for them. One of the constants in American media policy has been that each new distribution technology should set aside some capacity to ensure that the public has access to mass communication, and that noncommercial content producers have access to the public.[155] In a world of linear programming, with linear programming channels, set-asides and channel reservations made sense. Public service set-asides as a matter of transmission capacity are much harder to achieve today. But the value of that transmission capacity can and should be invested into the public service media mission.

The fourth principle is ***technological neutrality.*** The Commission has committed itself to technological neutrality in multiple proceedings.[156] The principle that policy should not favor one kind of technical deployment over another is well enshrined in telecommunications policy

[154] *See, e.g.*, ThinkTV and CET to Form New Regional Company Public Media Connect, Inc., ThinkTV Press Release, May 8, 2009, *available at* http://www.thinktv.org/about/about_merger.html (announcing the merger of Greater Dayton Public Television with Greater Cincinnati Public Television to form a regional, non-profit public broadcasting and media corporation, Public Media Connect, while keeping both stations' transmitters and facilities).

[155] *See, e.g.*, 47 U.S.C. 531 (2007) (cable set aside for public, educational, and governmental channels); 47 U.S.C. § 335 (2007) (satellite television set aside for noncommercial channels)

[156] *See, e.g., In re* Service Rules for the 700 MHz Bands, 23 F.C.C.R. 14,301, 14,385 (2008) (citing the "Commission's long-held policy on technology neutrality"); *In re* Schools and Libraries Universal Service Support Mechanism, 18 F.C.C.R. 9202, 9211 (2003) (restating commitment to technology neutrality).

more generally.[157] The kinds of revisions to the Public Broadcasting Act that are outlined here would render federal support for public media neutral as to the kinds of technologies that public media entities use. Giving noncommercial licensees the ability to exchange broadcast capacity for other kinds of public media capacities is consistent with the principle of technological neutrality and would advance the goals of a new Public Media Act.

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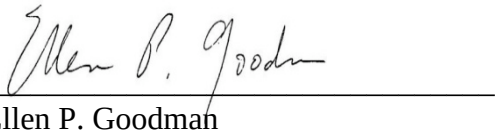
All of the changes in structure, governance, policy, and practice that are necessary to support public media networks of maximal service to connected communities are not within the FCC's power to effect. Indeed, most of these changes cannot be implemented by the FCC alone. The Commission can, however, provide leadership in recognizing the role that public media might play in advancing broadband adoption and the public purposes of broadband deployment. Moreover, some of the steps needed to facilitate the transition from public broadcasting to public media are squarely within the Commission's jurisdiction. They will take some time to think through and implement. The first step of recognizing the promise and components of change should be taken in the National Broadband Plan.

Respectfully submitted,

By:



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[157] NATIONAL TELECOMMUNICATIONS INFORMATION ADMINISTRATION, NETWORKED NATION: BROADBAND IN AMERICA 2007, at 5 (Jan. 2008), *available at* http://www.ntia.doc.gov/reports/2008/NetworkedNationBroadbandinAmerica2007.pdf (endorsing technological neutrality and describing it as the policy of the United States).